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```
=> s lentinan/cn
L1          1 LENTINAN/CN
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=> d l1 1 ibib abs
'IBIB' IS NOT A VALID FORMAT FOR FILE 'REGISTRY'
'ABS' IS NOT A VALID FORMAT FOR FILE 'REGISTRY'
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The following are valid formats:

Substance information can be displayed by requesting individual  
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REG - RN  
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FIDE - All substance data, except sequence data  
IDE - FIDE, but only 50 names  
SQIDE - IDE, plus sequence data  
SQIDE3 - Same as SQIDE, but 3-letter amino acid codes are used  
SQD - Protein sequence data, includes RN  
SQD3 - Same as SQD, but 3-letter amino acid codes are used  
SQN - Protein sequence name information, includes RN

CALC - Table of calculated properties  
EPROP - Table of experimental properties  
PROP - EPROP and CALC

Any CA File format may be combined with any substance format to  
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IND -- Index Data  
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ENTER DISPLAY FORMAT (IDE):d ll 1  
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SQD3 - Same as SQD, but 3-letter amino acid codes are used  
SQN - Protein sequence name information, includes RN  
  
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The IALL format is the same as ALL with BIB ABS and IND indented,  
with text labels.

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messages:

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HELP FORMATS -- To see detailed descriptions of the predefined formats.  
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L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2003 ACS  
RN 37339-90-5 REGISTRY  
CN \*\*\*Lentinan (9CI)\*\*\* (CA INDEX NAME)  
OTHER NAMES:  
CN Biomodule  
CN LC 33

ENTE A polysaccharide of Lentinus edodes used as an immuno-accelerator  
MF Unspecified  
CI PMS, COM, MAN  
PCT Manual registration  
LC STN Files: ADISINSIGHT, ADISNEWS, AGRICOLA, BIOBUSINESS, BIOSIS,  
BIOTECHNO, CA, CANCERLIT, CAPLUS, CBNB, CHEMCATS, CIN, DDFU, DRUGU,  
EMBASE, IPA, MEDLINE, MRCK\*, NAPRALERT, PHAR, PROMT, RTECS\*, TOXCENTER,  
USPATFULL, VETU  
(\*File contains numerically searchable property data)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

443 REFERENCES IN FILE CA (1957 TO DATE)

16 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

443 REFERENCES IN FILE CAPLUS (1957 TO DATE)

#### REFERENCE 1

AN 139:12302 CA  
TI Laminaria polysaccharides for therapeutical treatments  
IN Yvin, Jean-Claude; Vetvicka, Vaclav  
PA Laboratoires Goeemar S.A., Fr.  
SO PCT Int. Appl., 29 pp.  
CODEN: PIXXD2  
DT Patent  
LA English  
IC ICM A61K035-80  
ICS A61K031-716; A61P031-04; A61P031-10; A61P031-12; A61P037-04;  
A61P035-00

CC 63-6 (Pharmaceuticals)  
Section cross-reference(s): 1

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003045414	A2	20030605	WO 2002-EP13512	20021129
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	US 2003119780	A1	20030626	US 2001-999202	20011130
PRAI	US 2001-999202		20011130		
AB	A therapeutical method comprises administration to a patient of an effective amt. of esp. sol. laminarin for the treatment of tumors and more generally of cancers of the group comprising breast cancer, lung cancer, esophagus cancer, stomach cancer, intestine and colon cancers, and for the treatment of viral, bacterial and fungal diseases as well as diseases related to immunostimulant deficiencies of human beings and warm-blood animals.				
ST	antitumor antiinfective immunostimulant laminarin				
IT	Infection (bacterial; laminarin for treatment of tumors and infections and immunodeficiencies)				
IT	Intestine, neoplasm (colon; laminarin for treatment of tumors and infections and immunodeficiencies)				
IT	Drug delivery systems (granules; laminarin for treatment of tumors and infections and immunodeficiencies)				
IT	Antimicrobial agents Antitumor agents Esophagus, neoplasm Human Immunodeficiency Immunostimulants Intestine, neoplasm Laminaria saccharina Lung, neoplasm Mammary gland, neoplasm Mouthwashes Mycosis Stomach, neoplasm				

- (laminarin for treatment of tumors and infections and immunodeficiencies)
- IT Drug delivery systems  
(lozenges; laminarin for treatment of tumors and infections and immunodeficiencies)
- IT Drug delivery systems  
(nasal sprays; laminarin for treatment of tumors and infections and immunodeficiencies)
- IT Lymphocyte  
(natural killer cell, stimulation by; laminarin for treatment of tumors and infections and immunodeficiencies)
- IT Drug delivery systems  
(parenterals; laminarin for treatment of tumors and infections and immunodeficiencies)
- IT Tumor necrosis factors  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(prodn. stimulation by; laminarin for treatment of tumors and infections and immunodeficiencies)
- IT Drug delivery systems  
(tablets; laminarin for treatment of tumors and infections and immunodeficiencies)
- IT Drug delivery systems  
(vaginal; laminarin for treatment of tumors and infections and immunodeficiencies)
- IT Infection  
(viral; laminarin for treatment of tumors and infections and immunodeficiencies)
- IT 9008-22-4P, Laminarin 37339-90-5P, Lentinan  
RL: PAC (Pharmacological activity); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(laminarin for treatment of tumors and infections and immunodeficiencies)

#### REFERENCE 2

- AN 138:400474 CA
- TI Optimum nitrogen source for Lentinus edodes fermentation and purification of lentinan
- AU Teng, Li-rong; Meng, Qing-fan; Chen, Jia; Qin, Yi; Xu, Yue-chi; Wu, Lei; Liu, Lan-ying
- CS College of Life Science, Jilin University, Changchun, 130023, Peop. Rep. China
- SO Jilin Daxue Xuebao, Lixueban (2003), 41(1), 102-105  
CODEN: JDXLAW; ISSN: 1671-5489
- PB Jilin Daxue Xuebao, Lixueban Bianjibu
- DT Journal
- LA Chinese
- CC 16-4 (Fermentation and Bioindustrial Chemistry)  
Section cross-reference(s): 10
- AB Orthogonal design was used to explore the optimum org. nitrogen sources for Lentinus edodes fermn. and the best ratio of the three nitrogen sources in the medium is bean powder 1, yeast ext. paste 1.5, and tryptone 0.2. The results also indicate that bean powder is the best nitrogen source for Lentinus edodes fermn. Subsequently, Lentinus edodes was cultured in the optimum medium for 130 h and the concn. of lentinan in the fermn. medium could reach the climax of 25.1 mg/mL. lentinan was crudely extd. from the liq. medium by alc. pptn., then deproteinized by the Sevag method from the polysaccharides and the deproteinized lentinan was purified by gel filtration with Sephadex G-75 to obtain two components of lentinan.
- ST Lentinus lentinan fermn purifn
- IT Experimental design  
Fermentation  
Lentinula edodes  
Nitrogen sources, microbial  
(optimum nitrogen source for Lentinus edodes fermn. and purifn. of lentinan)
- IT 37339-90-5P, Lentinan  
RL: BPN (Biosynthetic preparation); PUR (Purification or recovery); BIOL (Biological study); PREP (Preparation)  
(optimum nitrogen source for Lentinus edodes fermn. and purifn. of lentinan)

#### REFERENCE 3

- AN 138:362354 CA

AU Markova, Nadya; Kussovski, Vesselin; Radoucheva, Tatyana; Dilo, Krasimira; Georgieva, Neli  
 CS Institute of Microbiology, Department of Pathogenic Bacteria, Bulgarian Academy of Sciences, Sofia, 1113, Bulg.  
 SO International Immunopharmacology (2002), 2(12), 1641-1645  
 CODEN: IINMBA; ISSN: 1567-5769  
 PB Elsevier Science B.V.  
 DT Journal  
 LA English  
 CC 1-7 (Pharmacology)  
 Section cross-reference(s): 63  
 AB Lentinan (Ajinomoto, Japan) was administrated i.p. and intranasally (i.n.) at different doses (1, 5, and 10 mg/kg) to rats. Effectiveness of Lentinan treatment was evaluated by comparative testing of cell activation (establishing the no., glycolytic and acid phosphatase activity, H2O2 prodn. and killing ability against Salmonella enteritidis and Staphylococcus aureus) at 2 different compartments-peritoneal and broncho-alveolar cavities. The results indicated that Lentinan induced high-grade activation of peritoneal cells (PCs) and esp. of broncho-alveolar cells (BACs) with markedly enhanced effector function (killing ability against S. aureus). Generally, Lentinan, known usually with its parenteral routes of application, can be successful to stimulate the host cell response in the respiratory tract by intranasal route of administration.  
 ST lentinan immunostimulant peritoneum lung alveolus macrophage  
 IT Macrophage  
 (activation; i.p. and intranasal application of Lentinan on cellular response in rats)  
 IT Lung  
 (alveolus, macrophage; i.p. and intranasal application of Lentinan on cellular response in rats)  
 IT Anti-inflammatory agents  
 Immunostimulants  
 Peritoneum  
 Respiratory tract  
 (i.p. and intranasal application of Lentinan on cellular response in rats)  
 IT 37339-90-5, Lentinan  
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (i.p. and intranasal application of Lentinan on cellular response in rats)

RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD

- (1) Chihara, G; Dev Biol Stand 1992, V77, P191 MEDLINE
- (2) Chihara, G; Nature 1969, V222, P687 CAPLUS
- (3) Chihara, G; Nature 1970, V225, P943 CAPLUS
- (4) Cropz, J; Proc Natl Acad Sci U S A 1985, V82, P2751
- (5) Dennert, G; J Natl Cancer Inst 1973, V51, P1727 CAPLUS
- (6) Irinoda, K; Int J Immunopharmacol 1992, V14, P971 CAPLUS
- (7) Jong, S; Adv Appl Microbiol 1993, V39, P153 CAPLUS
- (8) Kanai, K; Manipulation of host defense mechanisms 1981, V82, P65
- (9) Kaneko, Y; Microbial infections 1992, V39, P201
- (10) Maeda, Y; Immunomodulatory agents from plants 1999, P203 CAPLUS
- (11) Maeda, Y; Nature 1971, V229, P634 CAPLUS
- (12) Oka, M; Int J Immunopharmacol 1996, V18, P211 CAPLUS
- (13) Pick, E; J Immunol Methods 1980, V38, P161 CAPLUS
- (14) Radoucheva, T; Zentralbl Bakteriол, Mikrobiол Hyg, Abt 1, Orig A 1976, V235, P404
- (15) Radoucheva, T; Zentralbl Bakteriол, Mikrobiол Hyg, Abt 1, Orig A 1976, V235, P408
- (16) Vissar, L; Infect Immun 1995, V63, P2570

REFERENCE 4

AN 138:243251 CA  
 TI Linggu Yiyuan nutrient and preparing thereof  
 IN Yang, Shuhua  
 PA Peop. Rep. China  
 SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 7 pp.  
 CODEN: CNXXEV  
 DT Patent  
 LA Chinese  
 IC ICM A61K031-715  
 ICS A61P001-14; A23L001-30  
 CC 63-5 (Pharmaceuticals)

## Section cross-reference(s): 18

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CN 1352946	A	20020612	CN 2000-132201	20001110
PRAI	CN 2000-132201		20001110		
AB	The nutrient is composed of sol. pachyman 1-2, lentinan 1-2, maltodextrin (DE of 5-10%) 95-97, stevioside 0.3-0.5, and vanillin 0.08-0.3%.				
ST	pachyman lentinan nutrient				
IT	Natural products				
	RL: PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)				
	(Linggu Yiyuan; prepn. of Linggu Yiyuan nutrient)				
IT	Nutrients				
	(prepn. of Linggu Yiyuan nutrient)				
IT	121-33-5, Vanillin 9037-88-1, Pachyman 9050-36-6, Maltodextrin 37339-90-5, Lentinan 57817-89-7, Stevioside				
	RL: PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)				
	(prepn. of Linggu Yiyuan nutrient)				

## REFERENCE 5

AN 138:220458 CA  
 TI Production of fungal extracellular immune stimulating compounds  
 IN Kristiansen, Bjoern  
 PA Medimush Aps, Norway  
 SO PCT Int. Appl., 29 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 IC ICM C12P019-00  
 CC 16-2 (Fermentation and Bioindustrial Chemistry)  
 Section cross-reference(s): 15

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003020944	A2	20030313	WO 2002-IB3557	20020903
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MX, MY, NZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
PRAI	NO 2001-4256		20010903		
AB	A process is described for the prodn. of an immunostimulant by submerged cultivation of in which mycelium from agar plates or a fermn. broth is added to a liq. medium in a shake flask or a bioreactor contg. nutrients such as malt ext., yeast ext., peptone, and glucose having access to air or to which air is added, and which is kept in const. movement at .apprx.28.degree.. At the proper conditions, there will be an increase in the prodn. of extracellular lentinan, which is shown to be a better immunostimulant than intracellular lentinan. The extracellular product is pptd. from the growth medium by means of methods for the pptn. of microbial polysaccharide.				
ST	immune stimulant fermn fungi				
IT	Natural products, pharmaceutical				
	RL: BMF (Bioindustrial manufacture); BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)				
	(Lingzhi; prodn. of fungal extracellular immune stimulating compds.)				
IT	Fermentation				
	Fungi				
	Grifola frondosa				
	Immunostimulants				
	Lentinula edodes				
	Schizophyllum commune				
	Trametes versicolor				
	(prodn. of fungal extracellular immune stimulating compds.)				
IT	Glycoproteins				
	RL: BMF (Bioindustrial manufacture); BPN (Biosynthetic preparation); BIOL				

(Biological study); PREP (Preparation)  
 (prodn. of fungal extracellular immune stimulating compds.)  
 IT 9050-67-3P, Schizophyllan 37339-90-5P, Lentinan 104074-36-4P, Grifolan  
 RL: BMF (Bioindustrial manufacture); BPN (Biosynthetic preparation); BIOL  
 (Biological study); PREP (Preparation)  
 (prodn. of fungal extracellular immune stimulating compds.)

# REFERENCE 6

- AN 138:147300 CA  
 TI Suppressive effect of polysaccharides from the edible and medicinal mushrooms, *Lentinus edodes* and *Agaricus blazei*, on the expression of cytochrome P450s in mice  
 AU Hashimoto, Takashi; Nonaka, Yuji; Minato, Ken-Ichiro; Kawakami, Sachiko; Mizuno, Masashi; Fukuda, Itsuko; Kanazawa, Kazuki; Ashida, Hitoshi  
 CS Division of Life Science, Graduate School of Science and Technology, Kobe University, Kobe, 657-8501, Japan  
 SO Bioscience, Biotechnology, and Biochemistry (2002), 66(7), 1610-1614  
 CODEN: BBBIEJ; ISSN: 0916-8451  
 PB Japan Society for Bioscience, Biotechnology, and Agrochemistry  
 DT Journal  
 LA English  
 CC 1-6 (Pharmacology)  
 AB To investigate the effects of lentinan from *Lentinus edodes* and polysaccharides from *Agaricus blazei* (ABPS) on the expression of cytochrome P450s (CYPs), lentinan (10 mg/kg/day) or ABPS (200 mg/kg/day) was administered to female BALB/c mice four times every other day by i.p. injection. Lentinan and ABPS suppressed both the constitutive and 3-methylcholanthrene-induced CYP1A expression and ethoxyresorufin-O-deethylation activity in the liver.  
 ST polysaccharide *Lentinus Agaricus* cytochrome P4501A expression  
 IT Transcription factors  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (AP-1 (activator protein 1); effect of polysaccharides from edible and medicinal mushrooms, *Lentinus edodes* and *Agaricus blazei*, on expression of cytochrome P450s in mice)  
 IT Transcription factors  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (NF- $\kappa$ B (nuclear factor of  $\kappa$  light chain gene enhancer in B-cells); effect of polysaccharides from edible and medicinal mushrooms, *Lentinus edodes* and *Agaricus blazei*, on expression of cytochrome P450s in mice)  
 IT Tumor necrosis factors  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (TNF- $\alpha$ ; effect of polysaccharides from edible and medicinal mushrooms, *Lentinus edodes* and *Agaricus blazei*, on expression of cytochrome P450s in mice)  
 IT Genetic element  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (XRE (xenobiotic-responsive element); effect of polysaccharides from edible and medicinal mushrooms, *Lentinus edodes* and *Agaricus blazei*, on expression of cytochrome P450s in mice)  
 IT *Agaricus blazei*  
*Lentinus*  
 (effect of polysaccharides from edible and medicinal mushrooms, *Lentinus edodes* and *Agaricus blazei*, on expression of cytochrome P450s in mice)  
 IT Natural products, pharmaceutical  
 Polysaccharides, biological studies  
 RL: NPO (Natural product occurrence); PAC (Pharmacological activity); BIOL (Biological study); OCCU (Occurrence)  
 (effect of polysaccharides from edible and medicinal mushrooms, *Lentinus edodes* and *Agaricus blazei*, on expression of cytochrome P450s in mice)  
 IT 10102-43-9, Nitrogen oxide (NO), biological studies 332859-78-6, Cytochrome P 450 1A  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (effect of polysaccharides from edible and medicinal mushrooms, *Lentinus edodes* and *Agaricus blazei*, on expression of cytochrome P450s in mice)  
 IT 37339-90-5, Lentinan  
 RL: NPO (Natural product occurrence); PAC (Pharmacological activity); BIOL (Biological study); OCCU (Occurrence)  
 (effect of polysaccharides from edible and medicinal mushrooms, *Lentinus edodes* and *Agaricus blazei*, on expression of cytochrome P450s in mice)

- (1) Abdel-Razzak, Z; Mol Pharmacol 1994, V46, P1100 CAPLUS
- (2) Abel, G; Int J Immunopharmacol 1989, V11, P615 CAPLUS
- (3) Ashida, H; FEBS Lett 2000, V476, P213 CAPLUS
- (4) Ashida, H; Toxicol Appl Pharmacol 2001, V177, P59 CAPLUS
- (5) Borchers, A; Proc Soc Exp Biol Med 1999, V221, P281 CAPLUS
- (6) Bradham, C; Am J Physiol 1998, V275, PG387 CAPLUS
- (7) Chihara, G; Cancer Res 1970, V30, P2776 CAPLUS
- (8) Fruehauf, J; Immunopharmacology 1982, V5, P65 CAPLUS
- (9) Gillesby, B; Biochemistry 1997, V36, P6080 CAPLUS
- (10) Itoh, H; Jpn J Pharmacol 1994, V66, P265 CAPLUS
- (11) Kishimoto, T; Annu Rev Immunol 1988, V6, P485 CAPLUS
- (12) Minato, K; Int J Medicinal Mushrooms 1999, V1, P265
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- (16) Paton, T; Biochem Pharmacol 1998, V55, P1791 CAPLUS
- (17) Sang, H; Arch Biochem Biophys 1999, V363, P341 CAPLUS
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- (20) Stadler, J; Proc Natl Acad Sci USA 1994, V91, P3559 CAPLUS
- (21) Tian, Y; J Biol Chem 1999, V274, P510 CAPLUS
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# REFERENCE 7

AN 138:133473 CA  
 TI Nucleic acid-separating agents  
 IN Kimura, Taro; Shinkai, Seiji; Sakurai, Kazuaki; Komoto, Kazuya; Mizuarai, Masami  
 PA Japan Science and Technology Corporation, Japan  
 SO Jpn. Kokai Tokkyo Koho, 6 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM G01N030-88  
 ICS B01D015-08; B01J020-24; C12N015-00; G01N030-48; G01N030-26;  
 G01N030-30

CC 9-3 (Biochemical Methods)  
 Section cross-reference(s): 3

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003035704	A2	20030207	JP 2001-357095	20011122
PRAI	JP 2001-69654		20010313		

AB The agents for sepn. of helical polymers comprise .beta.-1,3-glucan derivs. or .beta.-1,3-xylan derivs. immobilized on supports. The helical polymers may be nucleic acids having helical parameters similar to those of .beta.-1,3-glucan or .beta.-1,3-xylan. An aq. soln. contg. Poly(A), Poly(U), Poly(G), and Poly(C) was passed through an affinity column contg. sizofiran supported on AF-Amino Toyopearl (amino group-contg. gel support). Poly(A) and Poly(C) were selectively retained on the gel column during elution with 30 mL of 50 mM phosphate buffer (pH 7.5) and was then eluted with 200 mM phosphate buffer (pH 6.0).

ST nucleic acid sepn affinity column glucan; xylan DNA RNA sepn affinity column; sizofiran gel affinity column DNA sepn

IT Affinity chromatographic stationary phases  
 Affinity chromatography  
 Immobilization, molecular  
 (gel-supported glucans or xylans for nucleic acid sepn.)

IT silica gel, reactions  
 RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)  
 (gel-supported glucans or xylans for nucleic acid sepn.)

IT DNA  
 Nucleic acids  
 RNA  
 mRNA  
 rRNA  
 tRNA  
 RL: PEP (Physical, engineering or chemical process); PUR (Purification or recovery); PYP (Physical process); PREP (Preparation); PROC (Process)  
 (gel-supported glucans or xylans for nucleic acid sepn.)

IT 9003-05-8, Polyacrylamide 9003-53-6, Polystyrene 9004-34-6, Cellulose, reactions 9008-22-4, Laminaran 9012-36-6, Agarose 9050-67-3, Sizofiran 9051-83-6, .beta.-1,3-xylan 9051-97-2 37339-90-5, Lentinan 39464-87-4, Scleroglucan 54724-00-4, Curdlan 104074-36-4, Grifolan 121631-74-1, AF-Amino Toyopearl 493019-43-5, AF Carboxy Toyopearl



RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)

(gel-supported glucans or xylans for nucleic acid sepn.)

IT 24937-83-5P, Poly(A) 25191-14-4P, Poly(G) 27416-86-0P, Poly(U)  
30811-80-4P, Poly(C)

RL: PEP (Physical, engineering or chemical process); PUR (Purification or recovery); PYP (Physical process); PREP (Preparation); PROC (Process)

(gel-supported glucans or xylans for nucleic acid sepn.)

## REFERENCE 8

AN 138:130727 CA

TI Antitumor effects induced by the combination of TNP-470 as an angiogenesis inhibitor and lentinan as a biological response modifier in a rabbit spontaneous liver metastasis model

AU Sano, Bun; Sugiyama, Yasuyuki; Kunieda, Katsuyuki; Sano, Jun; Saji, Shigetoyo

CS Second Department of Surgery, Gifu University School of Medicine, Gifu, 500-8705, Japan

SO Surgery Today (2002), 32(6), 503-509

CODEN: SUTOE5; ISSN: 0941-1291

PB Springer-Verlag Tokyo

DT Journal

LA English

CC 1-6 (Pharmacology)

AB Purpose: An angiogenesis inhibitor, TNP-470 (TNP), has shown promising results in tumor dormancy therapy, and we have been studying its antitumor effects using a rabbit spontaneous liver metastasis model. However, because inhibition was obsd. only at the step of micrometastasis, we examd. the effects of combining TNP in the same model with a nonspecific immunopotentiator, lentinan (LNT), as a biol. response modifier. Methods: The model was established by the inoculation of VX-2 tumors into the colon, and colectomy was subsequently performed, including the primary tumor. Combination (TNP + LNT) effects were evaluated in terms of the no. and vol. of metastatic nodules, microvessel d. (MVD), expression of proliferating cell nuclear antigen (PCNA), and apoptosis, using immunohistochem. staining with anti-CD31, antiPCNA monoclonal antibody, and the TUNEL (in situ nick end-labeling) method, resp. Results: Angiogenesis was significantly inhibited in the TNP + LNT group, and the apoptotic index was also significantly higher than in the TNP or LNT groups. The pos. expression of PCNA in the VX2 cells was reduced in the LNT alone and TNP + LNT groups, but not in the TNP alone group. Conclusion: These findings indicate that TNP-470 and lentinan could prove useful for preventing the development of metachronous liver metastases from colorectal cancers after curative resection.

ST TNP 470 lentinan colorectal tumor liver metastasis

IT Angiogenesis inhibitors

(antitumor effects induced by the combination of TNP-470 as an angiogenesis inhibitor and lentinan as a biol. response modifier in a rabbit spontaneous liver metastasis model)

IT Intestine, neoplasm

(colorectal, metastasis to liver; antitumor effects induced by the combination of TNP-470 as an angiogenesis inhibitor and lentinan as a biol. response modifier in a rabbit spontaneous liver metastasis model)

IT Antitumor agents

(liver, metastasis; antitumor effects induced by the combination of TNP-470 as an angiogenesis inhibitor and lentinan as a biol. response modifier in a rabbit spontaneous liver metastasis model)

IT Liver, neoplasm

(metastasis; antitumor effects induced by the combination of TNP-470 as an angiogenesis inhibitor and lentinan as a biol. response modifier in a rabbit spontaneous liver metastasis model)

IT 37339-90-5, Lentinan 129298-91-5, TNP-470

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL

(Biological study); USES (Uses)

(antitumor effects induced by the combination of TNP-470 as an angiogenesis inhibitor and lentinan as a biol. response modifier in a rabbit spontaneous liver metastasis model)

RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD

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# REFERENCE 9

AN 138:66329 CA  
 TI Effects of lentinan on nitric oxide production and intracellular glutathione in mouse peritoneal macrophages  
 AU Hou, Gan; Huang, Dinan; Zhu, Qifeng  
 CS Institute of Biochemistry and Molecular Biology, Guangdong Medical College, Zhanjiang, 524023, Peop. Rep. China  
 SO Zhongcaoyao (2002), 33(3), 245-247  
 CODEN: CTYAD8; ISSN: 0253-2670  
 PB Zhongcaoyao Zazhi Bianjibu  
 DT Journal  
 LA Chinese  
 CC 1-7 (Pharmacology)  
 AB The mechanism of lentinan (LTN) activating mouse peritoneal macrophages to produce nitric oxide (NO) was studied. The effects of LTN on NO output and intracellular glutathione in mouse peritoneal macrophages and correlation of them were studied. The prodn. of NO in mouse peritoneal macrophages was significantly increased by LTN, and level of intracellular GSH was decreased as increase of NO prodn. The above effect can be blocked efficiently by NO prodn. inhibitors. NO prodn. can be inhibited by GSH-lowering drugs. LTN can increase NO prodn. with depletion of intracellular GSH in the activated mouse peritoneal macrophages. It was suggested that intracellular GSH played an important role in regulation of NO prodn. and protection of host cells from cytotoxic attack induced by NO.  
 ST lentinan cytoprotectant macrophage nitric oxide glutathione  
 IT Cytoprotective agents  
     (effects of lentinan on nitric oxide prodn. and intracellular glutathione in mouse peritoneal macrophages)  
 IT Peritoneum  
     (macrophage; effects of lentinan on nitric oxide prodn. and intracellular glutathione in mouse peritoneal macrophages)  
 IT Macrophage  
     (peritoneal; effects of lentinan on nitric oxide prodn. and intracellular glutathione in mouse peritoneal macrophages)  
 IT 70-18-8, Glutathione, biological studies 10102-43-9, Nitric oxide, biological studies  
 RL: BSU (Biological study, unclassified); BIOL (Biological study) (effects of lentinan on nitric oxide prodn. and intracellular glutathione in mouse peritoneal macrophages)  
 IT 37339-90-5, Lentinan  
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (effects of lentinan on nitric oxide prodn. and intracellular glutathione in mouse peritoneal macrophages)

# REFERENCE 10

AN 138:8403 CA  
 TI Crosslinked elastin and process for producing the same  
 IN Miyamoto, Keiichi  
 PA Japan  
 SO PCT Int. Appl., 54 pp.

CODEN: PIXXDZ  
 DT Patent  
 LA Japanese  
 IC ICM C08H001-06  
 ICS C08L089-06; A61L027-22  
 CC 63-7 (Pharmaceuticals)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002096978	A1	20021205	WO 2002-JP5275	20020530
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
PRAI	JP 2001-163505		20010530		
AB	Disclosed are crosslinked elastin; a water sol. crosslinking agent to be used in the crosslinking; molded elastin articles; medical instruments and regeneration tissues using the crosslinked elastin; and a surgical therapy and a regeneration therapy with the use of these medical instruments. Thus, a biocompatible functional material having an elasticity appropriate for vital transplantation without causing release of cell-adhesive proteins is provided.				
ST	crosslinked elastin biocompatible prosthetic				
IT	Prosthetic materials and Prosthetics (implants; prosthetic materials and medical goods made of crosslinked elastins and functional substances)				
IT	Medical goods (prosthetic materials and medical goods made of crosslinked elastins and functional substances)				
IT	Caseins, biological studies Ciliary neurotrophic factor Collagens, biological studies Elastins Fibrins Fibronectins Fluoropolymers, biological studies Gelatins, biological studies Keratins Laminins Polyesters, biological studies Polyoxyalkylenes, biological studies Polysiloxanes, biological studies Polyurethanes, biological studies Sericins				
	RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (prosthetic materials and medical goods made of crosslinked elastins and functional substances)				
IT	Polysaccharides, biological studies RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (soy; prosthetic materials and medical goods made of crosslinked elastins and functional substances)				
IT	Transforming growth factors RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (.alpha.-; prosthetic materials and medical goods made of crosslinked elastins and functional substances)				
IT	821-38-5, 1,12-Dodecanedicarboxylic acid 32279-04-2, 4-Hydroxyphenyldimethylsulfonium methyl sulfate RL: RCT (Reactant); RACT (Reactant or reagent) (prosthetic materials and medical goods made of crosslinked elastins and functional substances)				
IT	476628-71-4P RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (prosthetic materials and medical goods made of crosslinked elastins and functional substances)				
IT	1398-61-4, Chitin 9000-01-5, Arabic gum 9000-07-1, Carrageenan 9000-36-6, Karaya gum 9000-65-1, Traganth gum 9002-04-4, Thrombin 9002-18-0, Agar 9002-84-0, Polytetrafluoroethylene 9002-88-4, Polyethylene 9002-89-5, Polyvinyl alcohol 9003-07-0, Polypropylene 9004-32-4, Sodium CMC 9004-34-6, Cellulose, biological studies 9004-54-0, Dextran, biological studies 9004-61-9, Hyaluronic acid				

9005-32-7, Alginic acid 9005-25-8, Starch, biological studies  
 9007-27-6, Chondroitin 9007-28-7, Chondroitin sulfate 9011-14-7,  
 Poly(methyl methacrylate) 9012-76-4, Chitosan 9016-00-6,  
 Polydimethylsiloxane 9032-43-3, Cellulose sulfate 9042-14-2, Dextran  
 sulfate 9057-02-7, Pullulan 11078-30-1, Galactomannan 11078-31-2,  
 Glucomannan 11138-66-2, Xanthan gum 24967-94-0, Dermatan sulfate  
 24980-41-4, Polycaprolactone 24991-23-9 25038-59-9, Polyethylene  
 terephthalate, biological studies 25104-18-1, Polylysine 25190-06-1,  
 Polytetramethylene glycol 25248-42-4, Polycaprolactone 25249-06-3,  
 Polygalacturonic acid 25322-68-3, Polyethylene glycol 25322-69-4,  
 Polypropylene glycol 25513-46-6, Polyglutamic acid 26023-30-3,  
 Poly[oxy(1-methyl-2-oxo-1,2-ethanediyl)] 26100-51-6, Polylactic acid  
 31900-57-9, Dimethylsilanediol homopolymer 37294-28-3, xyloglucan  
 37339-90-5, Lentinan 38000-06-5, Polylysine 52519-63-8, Carboxymethyl  
 chitin 54724-00-4, Curdlan 62229-50-9, Epidermal growth factor  
 71010-52-1, Gellan gum 71010-52-1D, Gellan gum, sulfated 78644-42-5,  
 Polymalic acid 78666-19-0, Polymalic acid sru 106096-93-9, Basic FGF  
 127464-60-2, Vascular endothelial growth factor  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (prosthetic materials and medical goods made of crosslinked elastins  
 and functional substances)

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD  
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COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
10.09	10.30

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
-0.62	-0.62

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